1.2 The Trusted Node Model

The DCDB currently accepts crowdsourced bathymetry (CSB) contributions through a network of Trusted Nodes, which are organizations or individuals that serve as data liaisons between mariners (data collectors) and the DCDB (Figure 1). Trusted Nodes may assist the mariner by supplying data logging equipment, providing technical support to vessels, downloading data from data loggers, and providing the information to the DCDB. The DCDB works with each Trusted Node to standardize metadata and data formats and define data delivery requirements. This model normalises data contributions and minimizes the requirements and effort for mariners.

At present, individual data contributors are encouraged to join an existing Trusted Node. In the future, the DCDB may expand its capability to support individual contributors or other models of contribution.

The concept of 'trusted node' came from the understanding that it would not be feasible for every individual mariner/contributor to approach the DCDB to discuss their data exchange individually and be expected to learn about data formats, how to formulate metadata, etc. At the same time, grouping a number of contributors from a same area or sector could allow for a central coordinator (ie: trusted node) to motivate, incentivise and provide feedback - e.g. a visualisation of the group's contributed data.

It is the trusted node's task to stay up to date with the ways and formats to exchange data with the DCDB, maintain the interest and involvement of the crowd and promote contribution. Ideally, the trusted node is able to contact a data contributor when the DCDB receives data with an obfuscated identifier (rendering the contribution practically anonymous), it can query the contributor about anomalies in its contributed dataset and watch over the good operation of the technology used to log. The trusted node is also the contributor’s first point of contact in case of questions or a need for technical support.

To achieve this, the trusted node will have to develop technical skills (software) to shape the incoming contributions into the data format required by DCDB - however, it is not the trusted node's responsibility to correct (e.g for tide or offsets), curate or clean the data to any extent. It is this working group's guidance that raw data, with a good indication of what the observer's offsets and context were, is preferable as a contribution to DCDB (refer to section 3.2.1).

Lastly, since trusted nodes may also be part of the IHO's Crowdsourced Bathymetry Working Group, they are the ideal conduit to bring feedback direct from the contributors and push for policy improvements and possibly changes.

Link to appendix with list of trusted nodes and their requirements / focus group.